TCT-69

A Comparison of 5-Year Results between Coronary-Artery Bypass Grafting and Drug-Eluting Stents for Unprotected Left Main Coronary Artery Disease in Elderly Patients

Haegeun Song, Gyung-Min Park, Chang-Hoon Lee, Jong-Seon Park, Jung-Min Ahn, Jun-Hyok Oh, Hyung-Oh Choi, Won-Jang Kim, Jong-Young Lee, Soo-Jin Kang, Duk-Woo Park, Seung-Whan Lee, Young-Hak Kim, Cheol Whan Lee, Seung-Wook Park, Seoung-Jung Park
Asan Medical Center, Seoul, Korea, Republic of

A Comparison of 5-Year Results between Coronary-Artery Bypass Grafting and Drug-Eluting Stents for Unprotected Left Main Coronary Artery Disease in Elderly Patients

Objectives: The objective of the present study was to compare the long-term (5-year) outcomes of percutaneous coronary intervention (PCI) and coronary bypass graft surgery (CABG) for elderly patients (≥75-years) with unprotected left main coronary artery (LMCA) disease.

Background: Limited data is available on long-term, comparative treatment effect of PCI or CABG for elderly patients with LMCA disease.

Methods: Between 2000 and 2006, we evaluated 260 patients over 75 years old with unprotected LMCA disease who received PCI with stenting (n=148) or underwent CABG (n=112). The complete follow-up data were available for at least 3 to 9 years (median 5.2 years). The adjusted, 5-year adverse outcomes (death; a composite outcome of death, Q-wave myocardial infarction [MI], or stroke; and target-vessel revascularization [TVR]) were compared among the two groups.

Results: After adjustment for differences in baseline risk factors, the 5-year risk of death (hazard ratio [HR], 0.94; 95% confidence interval [CI], 0.57-1.54, P=0.80) and the combined risk of death, Q-wave MI, or stroke (HR, 0.92; 95% CI, 0.57-1.52, P=0.77) were not significantly different for elderly patients undergoing PCI vs. CABG. However, there was a trend favoring CABG over PCI for TVR (HR, 3.5; 95% CI, 0.71 to 17.23, P=0.12) (**Table**).

Table. Cumulative events and Hazard Ratio for clinical outcomes after PCI compared with after CABG.

5-Years Outcomes	PCI	CABG	Adjusted risks	
	N (%)	N (%)	Hazard ratio (95% CI)	P value
Death	43(29.1)	39(34.8)	0.94(0.57-1.54)	0.80
Composite outcome (death, Q-wave MI, or stroke)	47(31.8)	41(36.6)	0.92(0.57-1.52)	0.77
TVR	13(8.8)	3(2.7)	3.5(0.71-17.23)	0.12

Conclusions: During long-term (5-year) follow-up, PCI with stenting showed similar rates of mortality and the composite of death, Q-wave MI, or stroke, but a trend toward higher rate of TVR, compared to CABG, for elderly patients (≥75-years) with unprotected LMCA disease.

TCT-70

Longest (5-Year) Available Clinical Outcomes After Drug-Eluting Stent Implantation for Unprotected Left Main Coronary Artery Disease

Jun-hyok Oh, Jung-Min Ahn, HaeGeun Song, Hyung Oh Choi, Jong-Seon Park, Yong-Giun Kim, Gyung-Min Park, Won-Jang Kim, Jong-Young Lee, Soo-Jin Kang, Duk-Woo Park, Seung-Whan Lee, Young-Hak Kim, CheolWhan Lee, Seong-Wook Park, Seung-Jung Park
Asan Medical Center, Seoul, Korea, Republic of

Background: Very, long-term efficacy and safety of DES implantation for unprotected LMCA disease have not been evaluated. The purpose of this study was to investigate the long-term (5-year) clinical outcomes after drug-eluting stent (DES) implantation for unprotected left main coronary artery (LMCA) disease.

Method: A total of 784 consecutive patients who underwent percutaneous coronary intervention (PCI) with DES implantation for unprotected LMCA were analyzed. We investigated the 5-year clinical outcomes (a composite outcome of death, Q-wave MI or stroke; target-vessel revascularization [TVR]; and definite stent thrombosis [ST]).

Results: The mean age was 62.46 ± 11.1 years and left ventricular ejection fraction (LVEF) 60.29 ± 10.9%. During the median follow up of 1650 days (interquartile range, 1382 to 1932), 89 (11.4%) patients had the composite of outcome (death, Q-wave MI, stroke); 111(14.2%) patients had TVR, and 11 (1.4%) patients had definite ST. Independent predictors for composite outcome (death, Q-wave MI, stroke) were age, renal failure, LVEF, peripheral vascular disease.(Table)

Table. Univariate and Multivariate analysis for the composite outcome (Death, Q-wave MI, Stroke)

Variable	Univariate analysis			Multivariate analysis		
	HR	95% CI	P value	HR	(95% CI)	P value
Age	1.073	1.051 - 1.096	<0.001	1.071	1.046 - 1.098	<0.001
Renal failure	6.411	3.563 - 11.535	<0.001	5.251	2.796 - 9.863	<0.001
LVEF (%)	0.951	0.936 - 0.966	<0.001	0.977	0.958 - 0.997	0.023
Peripheral vascular disease	3.663	1.487 -9.024	0.090	4.608	1.628 - 13.043	0.004
Insulin treatment	0.436	0.247 - 0.771	0.004			
Chronic obstructive pulmonary disease	3.254	1.421 - 7.451	0.005			
Peripheral vascular disease	3.663	1.487 - 9.024	0.005			
Non ST-elevation MI	0.945	1.149 - 3.293	0.013			
Right coronary artery disease	1.602	1.064 - 2.414	0.024			

Conclusion: For patients with unprotected LMCA disease, PCI with DES showed favorable long-term (5-year) efficacy and safety outcomes.

TCT-71

Disparate Predictors of In-Hospital Mortality in Elderly vs Nonelderly Patients with ST-Elevation Myocardial Infarction Undergoing Percutaneous Coronary Intervention

Puja B Parikh[1], Luis Gruberg[1], Srihari S. Naidu[2], Richard A Shlofmitz[3], Sorin J Brenner[4], Thomas Pappas[3], Kevin P Marzo[2], David L Brown[1], Allen Jeremias[1]
[1]Stony Brook University Medical Center, Stony Brook, NY;[2]Winthrop University Hospital, Mineola, NY;[3]St. Francis Hospital, Roslyn, NY;[4]Methodist Hospital, Brooklyn, NY

Background: Older age is a major risk for increased in-hospital mortality in the treatment of ST-elevation myocardial infarction (STEMI). We sought to identify disparate predictors of in-hospital mortality specific to elderly and nonelderly adults undergoing primary percutaneous coronary intervention (PCI) for STEMI.

Methods: The study population included 1,649 patients presenting with STEMI who underwent PCI between January 1, 2004 and December 31, 2007 at four New York State hospitals. The primary outcome of interest was in-hospital mortality.

Results: Of the 1,649 patients studied, 443 (26.9%) were elderly (age ≥ 70), 655 (39.7%) patients were age 55-69, and 551 (33.4%) were age < 55. Elderly patients were more often female, had worse renal function, and had higher rates of prior coronary artery bypass graft (CABG) surgery, peripheral vascular disease, congestive heart failure, and prior stroke. They also had more left anterior descending (LAD) artery and the saphenous vein graft (SVG) interventions. In-hospital outcomes are displayed in the Table.

	Age < 55 (n = 551)	Age 55-69 (n = 655)	Age ≥ 70 (n = 443)	p value
Males (%)	82.8%	78.0%	58.2%	<0.001
Ejection Fraction (%)	46 ± 11	45 ± 12	44 ± 12	0.203
Prior CABG (%)	2.4%	6.9%	7.9%	<0.001
Peripheral Vascular Disease (%)	1.5%	5.6%	10.2%	<0.001
Congestive Heart Failure (%)	2.5%	6.4%	12.0%	<0.001
Diabetes (%)	14.5%	19.1%	19.6%	0.054
Glomerular Filtration Rate (ml/min)	87 ± 25	79 ± 25	66 ± 24	<0.001
Hospital Length of Stay (days)	4.3 ± 7.3	5.0 ± 5.8	6.8 ± 7.8	<0.001
In-hospital mortality (%)	1.3%	1.4%	6.1%	<0.001

In multivariate analysis, elderly status was independently associated with in-hospital mortality (OR 4.04, 95%CI 1.85-8.80). Independent predictors of mortality were distinct in each age group and included congestive heart failure (OR 12.53, 95%CI 3.23-48.57) in the age 55-69 group and peripheral vascular disease (OR 12.62, 95%CI 1.34-119.07) in the age < 55 group. In the elderly group, independent predictors of mortality included prior CABG (OR 3.92, 95%CI 1.43-10.75), peripheral vascular disease (OR 2.99, 95%CI 1.10-8.08), and serum creatinine (per mg/dl) (OR 1.57, 95%CI 1.18-2.08).

Conclusions: In patients with STEMI undergoing PCI, 1) elderly status is associated with significantly higher rates of in-hospital mortality and 2) predictors of mortality differ in elderly and nonelderly patients.

TCT-72

A Comparison of One-Year Follow-up After Unprotected Left Main Lesions Stenting Using the Paclitaxel (Taxus) and the Everolimus (Xience V)-Eluting Stents: a Post-Hoc Analysis From the French Left main Taxus and LEMAX registries

Philippe Garot[1], Marie-Claude Morice[2], Neus Salvatella[2], Olivier Darremont[3], Yves Louvard[2], Marc Silvestri[4], Jean-Louis Leymarie[4], Didier Carrié[5], Thierry Lefèvre[2]
[1]Institut Cardiovasculaire Paris Sud, Quincy, France[2]Institut Cardiovasculaire Paris Sud, Massy, France[3]Clinique Saint-Augustin, Bordeaux, France[4]Clinique Clairval, Marseille, France[5]Hôpital Rangueil, Toulouse, France

Background and aim: In the treatment of unprotected left main (ULM) lesions, DES has appeared as a possible alternative to cardiac surgery. It is unknown whether 2nd generation are superior to 1st generation DES for this indication. Using the data of the French Left Main Taxus registry and the LEMAX (Left Main with Xience stent) registry, we sought to compare one-year outcome after LM stenting using in 464 consecutive Pts with ULM lesions and treated with DES between 2003 and 2008 in 4 french cath-labs.

Results: Among 464 Pts, 291 were treated with the Paclitaxel-eluting stent (PES) and 173 with the Everolimus-eluting stent (EES). There was no difference between Pts treated by PES and EES with regard to gender (76% males), age (mean 69.1±11.3 y-o), diabetes (29%), NSTEMI (38%), and LVEF<40% on admission (9%). Similarly, procedural data were not different between Pts treated by PES and EES with regard to radial approach (59%) and use of 6 F catheters (80%). Pts with distal LM lesions (77%) were treated using the provisional T stenting strategy in 92% with final kissing inflation in 96% (p=NS between groups). It is noteworthy that Pts treated for a distal LM bifurcation lesion with the PES had 1 stent in 58.3% of cases, compared with 76.4% in Pts treated with the EES (p=0.0003). The mean hospital stay was 4.5±3.5 days with no difference between groups. Cumulative events 1 year after the procedure are described below:

	PES N=291	EES N=173	p
STE-MI	1 (0.3%)	3 (1.7%)	0.059
Stroke	1 (0.3%)	4 (2.3%)	0.024
TLR	25 (8.6%)	5 (2.9%)	0.008
All cause mortality	16 (5.5%)	5 (2.9%)	0.096
MACCE	40 (13.7%)	13 (7.5%)	0.021

MACCE= STE-MI+Stroke+TLR+All cause mortality

Conclusion: When compared to the 1st generation Paclitaxel-eluting stent, unprotected left main stenting of non selected Pts with de novo left main lesions using the second generation Everolimus-eluting stent seems to be associated with less frequent adverse events.

ORAL